

SAC-5P-M12MSB/0,2-900/M12FSB - Bus system cable



1521041

<https://www.phoenixcontact.com/us/products/1521041>

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Bus system cable, INTERBUS, 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 0.2 m

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1521041 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF04 |
| Product key | AF1CKB |
| GTIN | 4017918945091 |
| Weight per piece (including packing) | 52.2 g |
| Weight per piece (excluding packing) | 50.41 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

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Technical data

Product properties

| | |
|----------------------|-------------------------|
| Product type | Data cable preassembled |
| Sensor type | INTERBUS |
| Number of positions | 5 |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | B |

Insulation characteristics

| | |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution | 3 |

Interfaces

| | |
|----------------------|----------|
| Bus system | INTERBUS |
| Signal type/category | INTERBUS |

Signaling

| | |
|------------------------|----|
| Status display | no |
| Status display present | no |

Electrical properties

| | |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage U_N | 48 V AC |
| | 60 V DC |
| Nominal current I_N | 4 A |

Mechanical properties

Mechanical data

| | |
|-----------------------------|------------|
| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|------------|

Material specifications

| | |
|--|---|
| Flammability rating according to UL 94 | V0 |
| Seal material | NBR |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | PA 6.6 |
| Material for screw connection | Zinc die-cast, nickel-plated |

Connector

Connection 1

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| | |
|---------------------|-------------------|
| Type | Plug straight M12 |
| Number of positions | 5 |
| Coding type | B (inverse) |

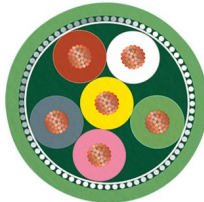
Connection 2

| | |
|---------------------|---------------------|
| Type | Socket straight M12 |
| Number of positions | 5 |
| Coding type | B |

Cable/line

| | |
|--------------|-------|
| Cable length | 0.2 m |
|--------------|-------|

INTERBUS [900]

| | |
|---------------------------------|---|
| Dimensional drawing |  |
| Cable weight | 70 kg/km |
| Number of positions | 6 |
| Shielded | yes |
| Cable type | INTERBUS [900] |
| Conductor structure | 3 x 2 x 0.22 mm ² |
| Signal speed | 0.66 c |
| Conductor structure signal line | 32x 0.10 mm |
| AWG signal line | 24 |
| Conductor cross section | 3x 2x 0.22 mm ² |
| External cable diameter | 8.00 mm |
| Outer sheath, material | PUR |
| External sheath, color | may green RAL 6017 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PE |
| Single wire, color | green-yellow, white-brown, gray-pink |
| Twisted pairs | 2 cores to the pair |
| Overall twist | 3 pairs to the core |
| Insulation resistance | ≥ 5 GΩ*km |
| Coupling resistance | < 250.00 mΩ/m (at 30 MHz) |
| Loop resistance | ≤ 159.80 Ω/km |
| Wave impedance | 120 Ω ±20 % (at 64 kHz) 100 Ω ±15 % (with 1 MHz) |
| Cable capacity | ≤ 60 nF/km (At 800 Hz) |
| Nominal voltage, cable | 250 V (Peak value, not for high-power applications) |

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| | |
|---|---|
| Test voltage Core/Core | 1500 V _{rms} |
| Test voltage Core/Shield | 1000.00 V _{rms} |
| Minimum bending radius, fixed installation | 7.5 x D |
| Minimum bending radius, flexible installation | 15 x D |
| Smallest bending radius, fixed installation | 60 mm |
| Smallest bending radius, movable installation | 120 mm |
| Dynamic load capacity (bending) | Max. bending cycles: 5000000, Bending radius: 120 mm, Traversing path: 10 m, Traversing rate: 1.6 m/s, Acceleration: 3.2 m/s ² |
| Near end crosstalk attenuation (NEXT) | ≥ 61 dB (at 772 kHz) |
| | ≥ 59 dB (with 1 MHz) |
| | ≥ 55 dB (at 2 MHz) |
| | ≥ 50 dB (at 4 MHz) |
| | ≥ 46 dB (at 8 MHz) |
| | ≥ 44 dB (at 10 MHz) |
| | ≥ 41 dB (at 16 MHz) |
| Shield attenuation | ≥ 40 dB (at 20 MHz) |
| | ≤ 15 dB/km (at 256 kHz) |
| | ≤ 24 dB/km (at 772 kHz) |
| | ≤ 27 dB/km (with 1 MHz) |
| | ≤ 52 dB/km (at 4 MHz) |
| | ≤ 84 dB/km (at 10 MHz) |
| | ≤ 112 dB/km (at 16 MHz) |
| Flame resistance | ≤ 119 dB/km (at 20 MHz) |
| | according to VDE 0472, Part 4, test type B |
| Ambient temperature (operation) | according to IEC 60332-1 |
| | -40 °C ... 80 °C (cable, fixed installation) |
| | -30 °C ... 70 °C (Cable, flexible installation) |

Environmental and real-life conditions

Ambient conditions

| | |
|---------------------------------|---|
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| | -40 °C ... 80 °C (cable, fixed installation) |
| | -30 °C ... 70 °C (Cable, flexible installation) |

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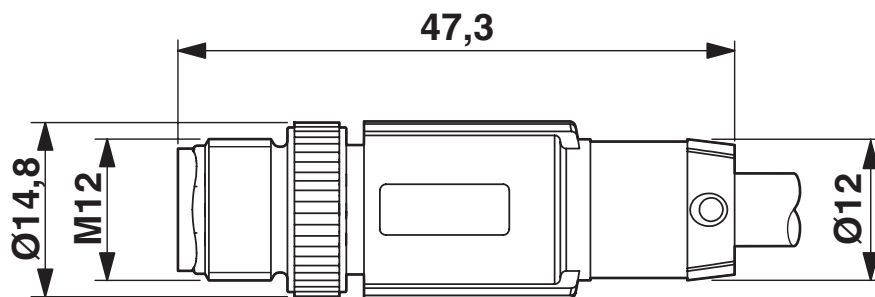


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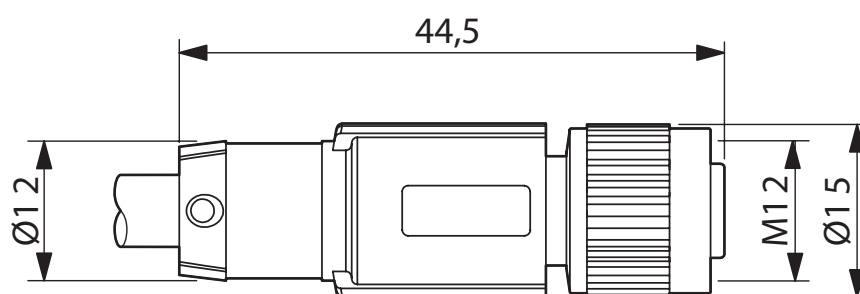
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



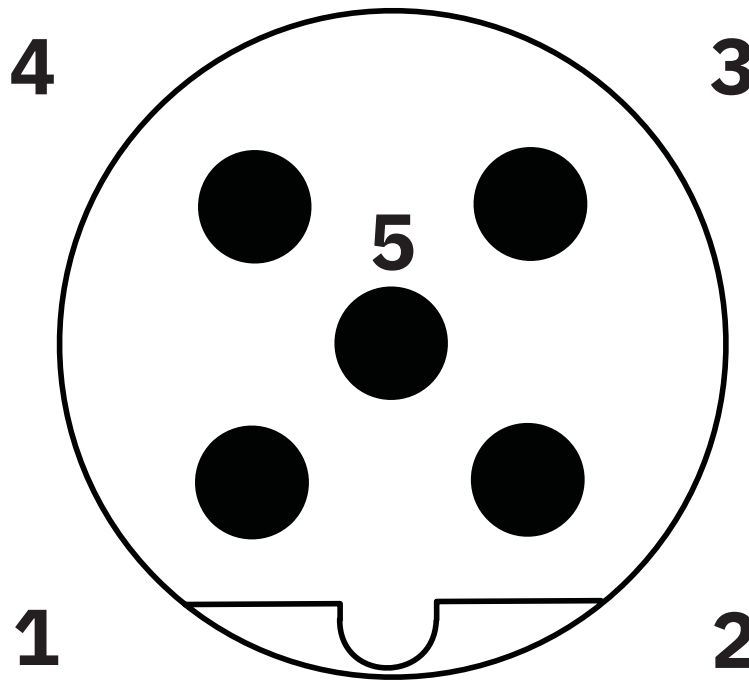
M12 x 1 socket, straight, shielded

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Schematic diagram



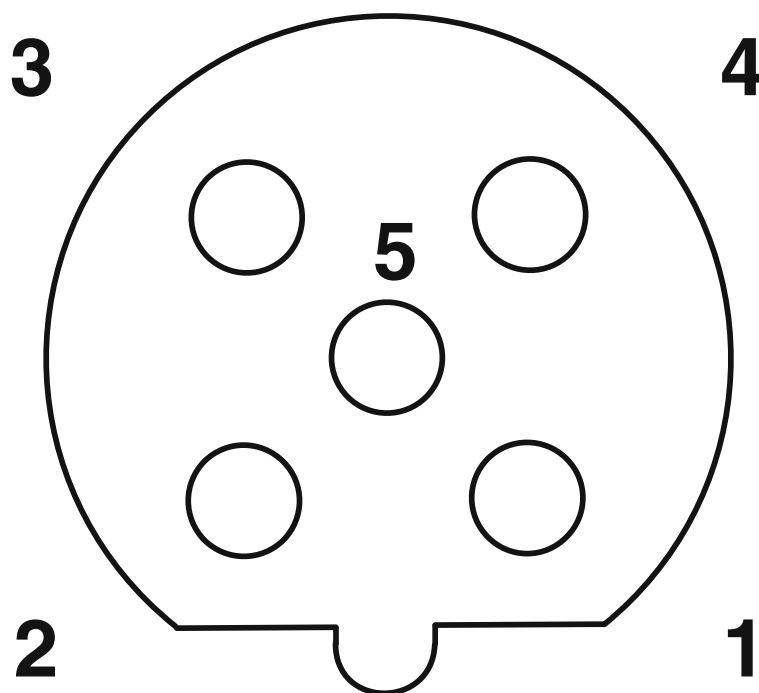
Pin assignment M12 male connector, 5-pos., B-coded, male side

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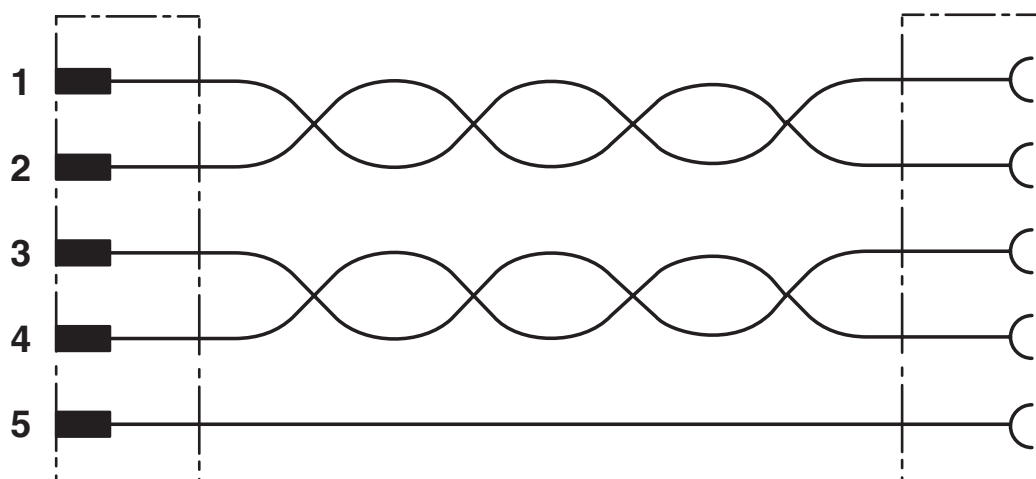
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Schematic diagram



Pin assignment M12 socket, 5-pos., B-coded, female side

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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Approvals

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EAC-RoHS

Approval ID: RU D-DE.HB35.B.00387

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27060307 |
| ECLASS-15.0 | 27060307 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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